



**THE ROLE AND DEVELOPMENT PROSPECTS OF AGROCLUSTERS IN THE CONDITIONS OF
INNOVATIVE DEVELOPMENT OF THE REPUBLIC OF UZBEKISTAN**

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ABSTRACT. *The article highlights the essence of clusters and their importance for ensuring the increase of production competitiveness. The necessity of introducing a cluster form of organizing the production of agricultural products is substantiated, and calculations are given on the coefficient of the clustering potential, which makes it possible to single out the characteristics of the clustering potential of the regions of Uzbekistan for the production of certain types of agricultural products.*

KEY WORDS: *agrarian sector, agrocluster, competition, cluster, fruit and vegetable production, agricultural products, efficiency.*

INTRODUCTION

Thanks to the consistent agrarian policy and the rational use of the potential that the agricultural sector has, the Republic of Uzbekistan has achieved a sustainable supply of the population's food needs. Thus, according to the data of 2017, all categories of farms produced potatoes in the volume of 3,014.6 thousand tons, vegetables collected - 11,433.6 thousand tons, melon fields - 2,094.8 thousand tons, fruits and berries - 3,076.3 thousand tons, grapes - 1 748.9 thousand tons. In addition, 2281.1 thousand tons of meat in live weight, 10 083.2 thousand tons of milk, 6,605.5 million eggs, 1089.7 thousand astrakhan skins were produced. Produced volume of fruits and vegetables per capita (about 300 kg of vegetables, 75 kg of potatoes and 44 kg of grapes) is about three times higher than the optimal consumption norms generally accepted in the world. [6]

At the same time, in the conditions of limited land and water resources, as well as taking into account the constant growth of the population of the republic, the introduction of innovative, resource-saving technologies at all stages of agricultural production is key to maximizing the potential of the agricultural sector.

Innovation activity is one of the most important factors for improving competitiveness. However, in the face of rising costs of innovation and an increase in the number of innovative developments



outside economic entities, agricultural enterprises need to combine their strength and resources in order to create a competitive product. One of the effective forms of combining resources are clusters.

The concept of "cluster" in relation to industries and companies was introduced into scientific circulation by the American economist M. Porter in 1990 as part of his concept of a diamond of national competitive advantages. [4]

MAIN PART

There are many types and definitions of clusters, they differ in scale, direction, but in general the essence of clusters is the same: a cluster is a group of geographically localized interconnected companies, suppliers of equipment, components, specialized services, infrastructure, research institutes, universities and other organizations, complementary and reinforcing the competitive advantages of individual companies and the cluster as a whole. [2] The interaction of enterprises and organizations included in the cluster is a combination of cooperation and competition, i.e. there is a constant exchange of personnel, innovations, technologies, sharing of infrastructure, services and advertising and marketing promotion.

The enterprises and organizations that make up the cluster are in most cases independent economic entities, and competition within the cluster is no less important a driving force behind the development of the cluster as a whole than cooperation. In the course of constant small conflicts (competition within the cluster), the system as a whole is optimized and increases its possibilities for participation in global competition. At the same time, the spread of know-how, various technologies throughout the system of interconnections in the cluster. These innovations are rapidly becoming a factor in the production of many firms, adapt to the market strategy of specific companies and, in turn, lead to a new round of innovative development.

Agrocluster is a geographically localized, innovatively oriented integrated structure organized on the basis of industrial and agricultural production, the purpose of which is to create an industrial basis for enhancing the competitiveness and productivity of the food sector of the region, redistributing value added and the integrated use of the socio-economic potential of the territory. [3]

THEORETICAL BACKGROUND

The advantage of agroclusters is innovations and the growth of labor productivity in agricultural production in comparison with isolated by location agricultural producers. All agricultural enterprises included in the cluster (including dekhkans and farms), as well as established with them relations of processing, trading, storage enterprises, benefit from belonging to the cluster by:



- improving the efficiency of the supply of raw materials, components and components, more successful use of subcontracting;
- availability and quality of specialized services;
- access to various financial resources;
- accessibility and quality of R & D opportunities;
- availability of specialized and productive human resources;
- building a network of formal and informal relations, for the transfer of market and technological information, knowledge and experience;
- creating a system for identifying collective benefits and dangers, forming a common vision and productive strategy for the development of the cluster;
- creating a business-state relationship system. [5]

The important role of the development of clusters is the development of the regulatory framework, support for small business, the establishment of interaction between the business and research sectors, investment companies and other entities. In this regard, the Government of Uzbekistan is taking concrete measures to widely introduce the cluster form of the organization of agricultural production.

MAIN PART

In particular, the Presidential Decree of 29.03.2018 N UP-5388 "On Additional Measures for Accelerated Development of Horticulture in the Republic of Uzbekistan" provides for the adoption of measures for the implementation of a cluster form of production of fruits and vegetables based on the formation of a chain according to the principle "seeds - seedlings (seedlings) - growing products - harvesting - storage - processing - transportation - delivery to the market ":

within a single or group of interrelated enterprises, independently carrying out the entire specified cycle from production to the sale of fruits and vegetables;

on the basis of guaranteed contracts between producers of agricultural products and enterprises by suppliers, processors, exporters, providing planting materials to agricultural producers, advance resources for the organization of agricultural work and purchasing their products at negotiated prices. [1]

According to the Decree, fruit and vegetable clusters are given the right to independently decide on the placement of crops, determine the volume of cultivation of products, their species and varieties, apply agrotechnological methods taking into account soil and climatic conditions and focus on demand in the domestic and foreign markets, as well as conclude contracts with farmer and dekhkan



farms for the harvesting of their agricultural products. In addition, fruit and vegetable clusters will be allocated land for the creation of nursery seedlings and seedlings, as well as logistics centers (refrigerators, storage facilities, processing facilities, infrastructure facilities for laboratories, machine-technical stations). Together with the Ministry of Water Management of the Republic of Uzbekistan, assistance is being provided to agricultural producers in cleaning up irrigation and collector facilities.

The task of engaging from 2019 in the cluster form of organization of agricultural production of all regions specialized in the cultivation of fruits and vegetables, necessitates the identification of sectoral competitive advantages in each region of the republic. To do this, it is necessary to calculate the clustering potential, which reflects the presence of competitive advantages of industries, enterprises and infrastructure organizations located in the region, the possibility of combining these advantages and using them to improve competitiveness.

The study and systematization of points of view of foreign and domestic scientists who support M. Porter's clustering concept and continue to conduct research in this direction, made it possible to identify characteristics of the clustering potential of the regions of Uzbekistan for the production of certain types of agricultural products. In accordance with the approach proposed by domestic scientists [3], the coefficient of clusterization was calculated, the evaluation method of which consists in calculati

K_{NM} – the coefficient of production is calculated as the ratio of the volume of production in the region to the volume of production in the national average

K_C – coefficient of regional specialization, calculated as the ratio of the share of the region in the total production of this type of product to the share of the same region in the total volume of gross output of agriculture in the country;

K_{NEP} - the coefficient of development of the processing industry, is calculated as the ratio of the available capacity for processing of products in the region to the available capacity for processing on average across regions;

$K_{ДП}$ - the coefficient of per capita production is calculated by the ratio of the gross weight of a region's industry in the corresponding structure of a country's industry to the proportion of a region's population in a country's population.

Based on the data of the coefficients of the following formula was calculated coefficient of the potential of clustering KK , the results of which are shown in Table 1.

$$K_k = K_{\text{ПМХ}} \times K_{\text{СХ}} \times K_{\text{ПЕРХ}} \times K_{\text{ДП}}$$

It should be noted that the creation of a cluster is appropriate in the framework of the selected specialization, if the value of the integral index exceeds 1.

Table 1. The coefficient of clustering potential of the regions of Uzbekistan for the production of certain types of agricultural products [3]

	Vegetables	Fruits and berries	Meat	Milk
Republic of Karakalpakstan	0,008	0,003	0,132	0,036
areas:				
Andijan	1,435	3,428	0,092	2,929
Bukhara	0,242	0,602	0,774	0,191
Jizzak	0,088	0,072	0,927	0,369
Kashkadarya	0,143	0,102	7,358	1,380
Navoi	0,064	0,150	1,706	0,278
Namangan	1,556	1,770	0,277	1,895
Samarkand	23,703	15,901	1,619	1,612
Surkhandarya	0,103	0,051	0,493	0,187
Sirdaryo	0,024	0,004	0,098	0,069
Tashkent	2,168	0,347	1,740	0,399
Fergana	0,238	1,020	0,139	1,243
Khorezm	0,300	0,404	0,525	0,773

According to the results of the calculations, the Samarkand and Tashkent regions and all areas of the Fergana Valley (Andijan, Namangan, Fergana) have the greatest clustering potential in the fruit and vegetable complex. Livestock agroklaster most appropriate to create in Kashkadarya region. Navoi and Tashkent regions have the potential to create agroclusters of beef cattle. In the Fergana Valley there are all possibilities for the successful functioning of the agrocluster of dairy cattle breeding and the production of dairy products.

So, it is indisputable that in order to increase competitiveness and improve the economic situation of each region and the whole country, it is necessary to conduct an effective economic policy. Cluster policy is quite suitable for this. The cluster contributes to the achievement of a specific economic effect and enhances the competitive advantages of individual enterprises, and,



consequently, of the cluster as a whole. More effectively than clusters, clusters cover important connections, ensuring complementarity of industries, promoting the development of technologies, skills, and disseminating information that is relevant to business. For strategic management of enterprises, these relations are fundamental in the competitive struggle, in determining the direction of business development, innovation, in increasing productivity, reducing production costs, etc. [five]. But clustering itself requires the implementation of certain measures to improve the competitiveness of enterprises that are part of a cluster:

- intensification of innovation activities by enterprises that are part of the cluster. At the same time, the costs of introducing new technologies are reduced due to the scale effect;
- deepening the integration and cooperation of cluster members in order to disseminate experience, knowledge and technology. Such cooperation can significantly reduce the risks of its participants, expands the resource capabilities, including through the use of partners' qualifications and competencies of partners, leads to savings in research and development costs by eliminating duplication and increasing productivity.
- strengthening partnerships with actors external to the cluster. A large number of technologies and resources are outside the cluster, and it becomes expedient to form partnerships in order to acquire the possibility of their use.
- Improving communications with authorities, research institutes and higher educational institutions. The authorities can provide substantial support to the cluster to increase its competitiveness, including in international markets. Research institutes and universities have a large number of scientific developments that can potentially be extremely useful for enterprises.

CONCLUSION

The implementation of the above conditions will contribute to a significant increase in the competitiveness of enterprises within the agrocluster; will ensure the effective development of agriculture; will allow to reduce production costs due to the general economic interests of the participants of the agrocluster; will provide an opportunity to ensure food security and expand exports of agricultural products.



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